

REPORT ON BOILERS.

No. 61924

Received at London Office 17 JAN 1940

Date of writing Report 11th Jan 1940 When handed in at Local Office 15.1.40 Port of Glasgow

No. in Survey held at Paisley Date, First Survey 1939 June 30th Last Survey 5th Jan 1940

Reg. Book. "BACCALIEU" (Number of Visits 28) Tons { Gross } Net }

on the 8th Jan

Master Paisley Built at Paisley By whom built Yellmy & Ferguson Yard No. 557 When built

Engines made at By whom made Engine No. When made

Boilers made at Paisley By whom made A. F. Craig & Co Ltd Boilers No. 723 When made 724

Nominal Horse Power 300 (Bh only) Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Columbells Ltd (Letter for Record S)

Total Heating Surface of Boilers 4508 sq ft Is forced draught fitted Coal or Oil fired

No. and Description of Boilers Two - Single ended Working Pressure 210 lb

Tested by hydraulic pressure to 365 lb Date of test 5-12-39 No. of Certificate 20492 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler One - 2 1/4" Double Spring Improved Lift

Area of each set of valves per boiler { per Rule 12.5 sq" as fitted 4.94 sq" Pressure to which they are adjusted Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 13' 9" Length 11' 0" inside Shell plates Material Steel Tensile strength 30-34 lb

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lah inter. } long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets { 3 3/4" } 9"

Percentage of strength of circ. end seams { plate 65.0 rivets 46.4 Percentage of strength of circ. intermediate seam { plate 85.4 rivets 87.9 combined 88.38 Working pressure of shell by Rules 212 lb

Percentage of strength of longitudinal joint { plate 85.4 rivets 87.9 combined 88.38

Thickness of butt straps { outer 3 1/2" inner 1 3/2" No. and Description of Furnaces in each Boiler 3 - Doughton

Material Steel Tensile strength 26-30 lb Smallest outside diameter 3' 3 5/32"

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 3 7/8" bottom 6 1/4" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 214 lb

End plates in steam space: Material Steel Tensile strength 26-30 lb Thickness 1 1/2" Pitch of stays 18 1/2" x 16 3/4"

How are stays secured Double nuts and washers Working pressure by Rules 231 lb

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 lb Thickness { 2 7/8" }

Mean pitch of stay tubes in nests 8.7" Pitch across wide water spaces 12 1/4" Working pressure { front 218 lb w.w.s. back 245 lb

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 lb Depth and thickness of girder

at centre 2 @ 9 1/2" x 4 5/8" long Length as per Rule 33" Distance apart 9" long 4 1/4" centre No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 210 lb (wings) Combustion chamber plates: Material Steel

Tensile strength 26-30 lb Thickness: Sides 4 3/8" Back 4 3/8" Top 4 3/8" Bottom 7/8"

Pitch of stays to ditto: Sides 9" x 8" Back 9" x 8" Top 8" x 9" long Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 214 lb Front plate at bottom: Material Steel Tensile strength 26-30 lb

Thickness 2 7/8" Lower back plate: Material Steel Tensile strength 26-30 lb Thickness 2 7/8"

Pitch of stays at wide water space 12 3/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 256 lb Main stays: Material Steel Tensile strength 28-32 lb

Diameter { At body of stay, 3 1/8" No. of threads per inch 6 Area supported by each stay 336 sq" Over threads ✓

Working pressure by Rules 218 lb Screw stays: Material Steel Tensile strength 26-30 lb

Diameter { At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 72 sq" Over threads ✓

Working pressure by Rules 211-216 Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, or Over threads *1 7/8"*
No. of threads per inch *9* Area supported by each stay *84 sq"* Working pressure by Rules *245-260*
Tubes: Material *Lat welded iron* External diameter { Plain *2 1/4"* Thickness { *9.6.9. 5/16" x 3/8"* No. of threads per inch *9*
Pitch of tubes *3 1/8" x 3 1/8"* Working pressure by Rules *215-260* Manhole compensation: Size of opening in shell plate *16 5/8" x 20 3/4"* Section of compensating ring *2 x 9 1/4" x 1 1/2"* No. of rivets and diameter of rivet holes *38 @ 1 7/16"*
Outer row rivet pitch at ends *9 1/8"* Depth of flange if manhole flanged *3 1/2"* Steam Dome: Material
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays
How connected to shell Inner radius of crown Working pressure by Rules
Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater

Manufacturers of

Tubes
Steel forgings
Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules
Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

Thos. C. Fair Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }

1939 June 30 July 13. 18. 26. Aug. 15. 21 Sept. 1. 6. 8. 15. 20. 25. 29 Oct. 5. 9. 13. 19 Nov. 2. 8. 16. 23. 24. 27 Dec. 4. 5. 8. 19 1940 Jan. 5.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Yes

Total No. of visits *28*

Is this Boiler a duplicate of a previous case *No* If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The boiler has been built under special survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good. The boiler has been built to the order of Messrs Fleming & Ferguson & will be installed in their yard No 557.

Survey Fee ... £ *27* : *10* :
Travelling Expenses (if any) £ : :

When applied for, *15 JAN 1940*

When received, *15/3/1940*

George Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 16 JAN 1940*

Assigned *TRANSMIT TO LONDON*



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